

AMENDMENTS TO THE CLAIMS

1. (original) An apparatus comprising:
an input waveguide for carrying an optical signal having a nominal wavelength; and
an output waveguide having a Bragg grating disposed proximate to said input waveguide,
said Bragg grating having an adjusted grating period that has been increased from a
nominal grating period to compensate for a Bragg wavelength shift.
2. (original) The apparatus of claim 1 wherein said Bragg grating is
implemented as a uniform grating having means for applying a temperature
gradient to said uniform grating.
3. (original) The apparatus of claim 1 wherein said Bragg grating is
implemented as a uniform grating having means for applying a strain gradient
to said uniform grating.
4. (original) The apparatus of claim 1 wherein said Bragg grating
has a higher periodicity in its middle portion than in its outer portions.
5. (original) The apparatus of claim 1 wherein said Bragg grating is
an apodized Bragg grating.
6. (original) The apparatus of claim 1 wherein said Bragg grating
has a variable grating period.
7. (original) A grating assisted direct coupler comprising:
an input waveguide carrying an optical signal having a nominal wavelength;

an output waveguide having a variable period Bragg grating for coupling said optical signal into said output waveguide, said variable period Bragg grating having an adjusted variable grating period that has been changed from a nominal variable grating period to compensate for a Bragg wavelength shift.

8. (original) The direct coupler of claim 7 further including means for applying a temperature gradient to said variable period Bragg grating.

9. (original) The direct coupler of claim 7 further including means for applying a strain gradient to said variable period Bragg grating.

10. (original) The direct coupler of claim 7 wherein said variable period Bragg grating has a higher periodicity in its middle portion than in its outer portions.

11. (original) The direct coupler of claim 7 wherein said variable period Bragg grating is an apodized Bragg grating.

12. (original) A method for compensating for a Bragg wavelength shift in a grating assisted direct coupler having an input waveguide and an output waveguide, said output waveguide having a Bragg grating formed thereon, the method comprising applying a temperature gradient to said Bragg grating.

13. (original) A method for compensating for a Bragg wavelength shift in a grating assisted direct coupler having an input waveguide and an output waveguide, said output waveguide having a Bragg grating formed thereon, the method comprising applying a stress gradient to said Bragg grating.

14. (original) A method for compensating for a Bragg wavelength shift in a grating assisted direct coupler having an input waveguide and an output waveguide, said output waveguide having a Bragg grating formed thereon, the method comprising varying the periodicity of said Bragg grating.